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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,880

10/12/2004

Sze-Ke Wang

13944-US-PA

5879

31561

7590

10/13/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

KONG, ANDREW D

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/711,880	Applicant(s) WANG, SZE-KE	
	Examiner Andrew Kong	Art Unit 2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,2,7-10,16 and 17 rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al. (US Pub 2004/0257535).

With respect to claim 1, Tanaka teaches a projection device having single light valve, suitable for projecting an image to a screen, the projection device comprising: a light source 3, for providing a light beam; a projection lens 6, disposed behind the light source, and located on a propagation path of the light beam; an image unit 4 and 5, disposed between the light source and the projection lens, and located on the propagation path of the light beam, wherein the image unit comprises a color production device 4 and a light valve 5 disposed behind the color production device, and located on the propagation path of the light beam; and a beam breaker module, disposed between the light source and the screen, and the beam breaker module selectively cutting in or cutting out from the propagation path of the light beam, wherein when the beam breaker module is on the propagation path of the light beam, the beam breaker module block the passing light beam within a specific time period according to a state of the color production device (clearly the shutter 7 and the color wheel 4 operates in a timely manner and also see the motor 20 connected to the control means 9 which shows the

shutter is closed or opened with certain period of time according to controller's command).

Claim 2 sets forth: The projection device of claim 1, wherein the beam breaker module comprises: an optical sensor 8, disposed beside the color production device, so as to sense the state of the color production device; a beam breaking part 7, disposed between the light source and the screen; and an actuator 20, coupled with the beam breaking part, so as to control the beam breaking part to cut in or cut out from the propagation path of the light beam. (See Tanaka, fig1)

Claim 7 sets forth: The projection device of claim2, wherein the beam breaking part is disposed between the projection lens and the screen. (see fig 1)

Claim 8 sets forth: The projection device of claim 1, further comprising a control unit 9, to synchronously control the color production device, the light valve, and the beam breaker module. (See Tanaka, fig1)

Claim 9 sets forth: The projection device of claim 2, further comprising a control unit, wherein the control unit comprises: a light valve driver, electrically coupled with the light valve; an actuator driver, electrically coupled with the actuator to control the beam breaking part; and a color production device driver, electrically coupled with the color production device, wherein the light valve driver, the actuator driver, and the color production device driver are used to synchronously control the light valve, the beam

breaker module, and the color production device. (Tanaka fig1, the lines from the controller 9 that connects to 20, 5 and 12 which show that the controller drives the gear motor for the shutter, DMD and the color wheel)

Claim 10 sets forth: The projection device of claim 1, wherein the color production device comprises a color wheel 4. (See Tanaka, fig1)

Claim 16 is rejected for the same reasons given in claim 1.

Claim 17 is rejected for the same reasons given in claim 2.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US Pub 2004/0257535). Tanaka teaches the shutter 7 being located between the projection lens and the screen. Tanaka does not teach the shutter being located in a different location. However, as mentioned by the applicant's remark filed on May 1, 2006, the location of the beam breaking part is merely a design choice.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to consider locating the shutter at a specific place for the purpose of effectively blocking the light.

In addition, it has been held that changing the configuration of a claimed element was a matter of choice which a person of ordinary skill in the art would have found obvious when absent of a persuasive evidence that the particular configuration of the claimed element was significant. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US Pub 2004/0257535) in view of Kwon (US Pub 2005/0018145). Tanaka teaches the salient features as above.

Tanaka does not teach a color wheel or color drum which has a red, green, blue and white filtering regions.

Kwon teaches a color wheel fig 1B, 102 and a color drum fig 2B, 202 which has a red, green, blue and white (or other combination of colors) filtering regions.

It would have been obvious to modify the invention disclosed by Tanaka to substitute the color drum of Kwon for the color wheel of Tanaka in order to generate high brightness images and reducing the degradation of images by using a color drum.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US Pub 2004/0257535) in view of Wang (US Pub 2004/0135975).

Tanaka teaches the salient features as above.

Tanaka does not teach that the system operates in high color saturation mode and a high brightness mode.

Wang teaches that by filtering the red and green beam without eliminating the yellow beam can improve the projection image brightness [0006] and filtering the yellow beam can optimize color performance to display the high color saturation [0022].

It would have been obvious to modify the invention disclosed by Tanaka to block or filter specific color such as that taught by Wang for the purpose of optimizing the projecting system for either high saturation or high brightness characteristic.

### ***Response to Arguments***

Applicant's arguments filed on 1 September 2006 have been fully considered but they are not persuasive.

The applicant's remark on page 11 states that, "Tanaka fails to teach, disclose, or suggest a limitation of 'the beam breaker module block the passing light beam within a specific time period according to a state of the color production device'". However, the examiner disagrees. For example, paragraph [0021] of Tanaka et al. (US 2004/0257535) states "the sensor means attached to that surface of the shutter which blocks the projection light detects the color temperature of the projection light. Thus, the detection of color temperature of the projection light is carried out within the apparatus body and, in addition, the sensor means senses the projection light after passing through the projection optics since it is disposed downstream of the projection

optics". The color temperature is different for each spectrum, for example, blue has a color temperature of 16000 kelvin and red 1800 kelvin. Therefore, the shutter system operates accordingly to the "state" (red, green or blue) of the color wheel. Also see paragraph [0042].

In the Background of the Invention, paragraph [0005] discusses the Japanese Patent Application No. 2001-188196 to teach the time based nature of the color wheel device. Each section of the color wheel, for example red, green and blue define the periodic color increments.

Also the examiner thinks it is unclear as to what "...according to a state of the color production device" in claim 1 and 16 means. For example, the state of the color production device can be when the light passes through one of red, green or blue filters or also the state can be when the color production device is turned off. If the power is off, the state of the color production device will be still and so does the beam breaker module and when the power is on both component will be in operation (moving) therefore there also exists a "time period" relationship.



**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

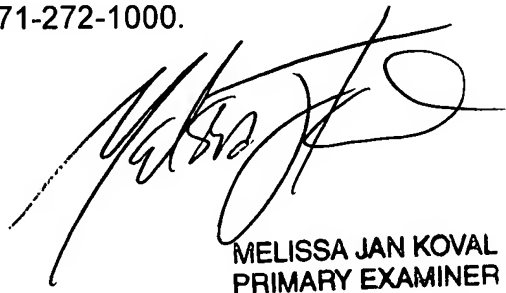
JP 2001-188196 teaches a color wheel operating in a timely manner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Kong whose telephone number is 571-272-8062. The examiner can normally be reached on Mon - Fri (8am - 5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on 571-272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AK



MELISSA JAN KOVAL  
PRIMARY EXAMINER